

Claims:

1. A method for fabricating a filtering member in which overlapping portions of a wire are bonded together in a layered manner through thermal treatment for forming a mesh, the method being characterized in that:

a contact surface pressure between portions of the wire to be bonded together is maintained as equal to or higher than a predetermined level that is set in accordance with a thermal treatment condition, and the thermal treatment is conducted in this state, such that each bonding portion of the wire has a strength equal to or greater than 4 N.

2. The method according to Claim 1, characterized in that, when a thermal treatment temperature and a thermal treatment time are specified as the thermal treatment condition, the thermal treatment is performed such that the following inequality is satisfied:

$$4 \leq C1 \times \exp(-C2/T) \times (t/T)^{0.4} \times P \times b^2 \times n$$

in which

T: thermal treatment temperature, t: thermal treatment time, P: contact surface pressure, b: lateral contact dimension between contact portions of the wire, n: number of bonding portions of the wire, and

wherein C1 and C2 are coefficients, with C1 = 4,105, and C2 = 9,000.

3. The method according to Claims 1 or 2, wherein:

the filtering member is a coil type filter in which the wire is wound in a layered manner for forming a mesh, and the contact surface pressure is produced by tension applied to the wire during winding of the wire.

4. The method according to Claim 3, wherein a winding end of the wire is fixed while the tension is applied to the wire during winding of the wire.

5. The method according to Claim 3 or 4, wherein the contact surface pressure is adjusted by changing the tension applied to the wire during winding of the wire.

6. A method for fabricating a filter for an airbag inflator in which overlapping portions of a metal wire are bonded together in a layered manner through thermal treatment for forming a mesh, the method being characterized in that:

a contact surface pressure between portions of the wire to be bonded together is maintained as equal to or higher than a predetermined level that is set in accordance with a thermal treatment condition, and the thermal treatment is conducted in this state, such that each bonding portion of the wire has a strength equal to or greater than 4 N.

7. The method according to Claim 6, characterized in that, when a thermal treatment temperature and a thermal treatment time are specified as the thermal treatment condition, the thermal treatment is performed such that the following inequality is satisfied:

$$4 \leq C1 \times \exp(-C2/T) \times (t/T)^{0.4} \times P \times b^2 \times n$$

in which:

T: thermal treatment temperature, t: thermal treatment time, P: contact surface pressure, b: lateral contact dimension between contact portions of the wire, n: number of bonding portions of the wire, and

C1 and C2 are coefficients, which C1 = 4,105, and C2 = 9,000.

8. The method according to Claims 6 or 7, wherein the filter is a coil type filter in which the wire is wound in a layered manner for forming a mesh, and the contact surface pressure is produced by tension applied to the wire during winding of the wire.
9. The method according to Claim 8, wherein a winding end of the wire is fixed while the tension is applied to the wire during winding of the wire.
10. The method according to Claim 8 or 9, wherein the contact surface pressure is adjusted by changing the tension applied to the wire during winding of the wire.